



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/603,223

06/25/2003

James O. Jones

TN311

4387

7590

11/06/2008

Unisys Corporation  
Attn: Michael B. Atlass  
MS/E8-114  
Unisys Way  
Blue Bell, PA 19424-0001

EXAMINER

SEBROSKI, ANDREW F

ART UNIT

PAPER NUMBER

4156

MAIL DATE

DELIVERY MODE

11/06/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                       |  |  |
|------------------------------|---------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/603,223  | <b>Applicant(s)</b><br>JONES, JAMES O. |  |
|                              | <b>Examiner</b><br>ANDREW F. SEBROSKI | <b>Art Unit</b><br>4156                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 18-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Prosecution History Summary***

Claims 1-31 are pending.

Claims 18-30 have been withdrawn with traverse as set forth below.

Claims 1-17 and 31 are rejected as set forth below.

***Election/Restrictions***

1. Applicant's election with traverse of Group I Claims 1-17 in the reply filed on 11 September 2008 is acknowledged. The traversal is on the ground(s) that 'the Examiner will be required to search the same areas for all three groups of claims, as recited in the application in order to adequately determine the patentability of the claims recited herein. This is not found persuasive because for the following reasons:

2. Restriction for examination purposes as indicated is proper because all the invention of group II, claims 18-30 as presented are independent/distinct for the reasons cited on *page 2-3 paragraph 3 under the 'Election/Restrictions' heading* of the prior Office Action. Moreover, despite Applicant's assertion that a similar field of search would be required, Applicant is reminded that there would still remain a burden if restriction were not required because:

- (I) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (II) the prior art applicable to one invention would not likely be applicable to another invention; and
- (III) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Art Unit: 4156

3. Upon further review, the Examiner notes that claim 31 has been rejoined with group I as claim 31 parallels the features of claim 1.

4. As such, claims 18-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

5. **The requirement is still deemed proper and is therefore made FINAL.**

***Claim Objections***

1. **Claim 3** is objected to because of the following informalities: the claim draws dependency from Claim 1, which claims a system, however recites a “program” and is unclear if the applicant is claiming an apparatus or system or instead a method or process. Appropriate correction is required.
  
2. **Claims 16 and 17** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. **Claim 16** refers to a computer readable medium performing the steps of **claim 13**. This claim does not include further method steps and appears to switch statutory classes. **Claim 17** refers to a computer readable medium with the functionality of the system of **claim 1**. This claim does not include further method steps and appears to switch statutory classes.
  
3. **Claim 31** is objected to because of the following informalities: “first applications program workload” on line 1 should read “first application's program”; “obtaining capturing” on line 4 should read “obtaining a capture”; “first applications” on line 6 should read “first applications”; “second applications program” on line 7 should read “second application's program”. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-12, 13, and 31** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. **Regarding claims 1-12**, in the preamble the claims recite a “computer system”, the system comprising various features. The body of the claim, however, is not commensurate with understood definition of a system or apparatus. More specifically, the various recited elements fail to provide any structure and merely recite functionally descriptive material and abstract ideas. It is thereby unclear what structure the system is comprised of and how the various features combine to form a system or apparatus.

4. **Regarding claims 13 and 31**, the Examiner notes that both claims repeatedly use elements disclosed in claim 1 as an antecedent basis for the claimed inventions disclosed in claims 13 and 31. Any limitation addressed in a set of claims should be treated as separate from other independent claims and proper antecedent basis must be established in the claims. Below are examples of lack of antecedent basis in the above mentioned claims. The Examiner submits these rejections as a partial list to help applicant understand the nature of the rejection for antecedent deficiencies of the claims, the list however is not indicative of all insufficient antecedent basis rejections.

Art Unit: 4156

The Applicant must provide proper antecedent basis for all limitations in the claimed invention, regardless of the limitations' disclosure in another claim.

5. **Claim 13** recites the limitations "said operating system" in line 2, "said resources" in line 3, "said computer system" in lines 3-4 and 6 and 11, "said each processes" in line 6, "said snapshot capture program" in lines 7 and 9. There is insufficient antecedent basis for the limitation in the claim.

6. **Claim 31** recites the limitation "said computer system" in line 3, 6, and 8, "said obtaining capturing" in line 4. There is insufficient antecedent basis for this limitation in the claim.



***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claims 1-17** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

3. **As per claims 1-12** are rejected because the claims recite a "computer system" but fail to recite any associated structure of the apparatus. The claims thereby are directed to non-statutory subject matter; the elements appear to be directed to software per se, such as the "operating system facility", the "snapshot capture program", and the "arithmetic process", which appear to be directed to software, which is not statutory subject matter.

4. **As per claims 13-17**, the claimed invention is directed to non-statutory subject matter, i.e. "a computer program". Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the

Art Unit: 4156

computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

5. Computer programs are often recited as part of a claim. The USPTO determines whether the computer program is being claimed as part of an otherwise statutory manufacture or machine. In such a case, the claim remains statutory irrespective of the fact that a computer program is included in the claim. The same result occurs when a computer program is used in a computerized process where the computer executes the instructions set forth in the computer program. Only when the claimed invention taken as a whole is directed to a mere program listing, i.e., to only its description or expression, is it descriptive material per se and hence nonstatutory.

6. Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and the USPTO treats a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material. When a computer program is claimed in a process where the computer is executing the computer program's instructions, the USPTO treats the claim as a process claim. When a computer program is recited in conjunction with a physical structure, such as a computer memory, the USPTO treats the claim as a product claim.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-6, 8, 10-15, and 31** are rejected under 35 U.S.C. 102(e) as being anticipated by Circenis et al.

3. **Concerning claim 1**, Circenis et al. discloses a computer system having an application workload profiling capability comprising (*Fig. 1*):

an operating system facility for tracking resource usage by objects using said resource in said computer system and making a data record of said tracking (*Page 3, paragraph 0029; Fig. 1, elements 60, 61, and 80*),

a snapshot capture program for capturing said usage tracking data for all said each objects running during a functional operation of said computer system, wherein said snapshot capture program captures a first snapshot capture file that includes usage tracking data in an active phase for all objects using resources during use of a program to be profiled while under load and wherein said

Art Unit: 4156

snapshot capture program is also for capturing a second snapshot capture file of usage tracking data for objects using resources during an active phase for all object using resources during a second condition of said computer system (*Page 3, paragraph 0025 and 0027-0028; Fig. 2, wherein the first snapshot is all processes listed within the table and the second snapshot is for elements 41 and 42; Page 4, paragraph 0031, lines 10-18; Fig. 4, elements 220 and 225*),

an arithmetic process for subtracting said second snapshot capture file from said first snapshot capture file (*Page 4, paragraph 0032, lines 8-12; Fig. 5, elements 270 and 275*).

4. **With respect to claim 2**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses wherein said second condition is an idle condition (*Page 4, paragraph 0020, lines 10-14*).

5. **With respect to claim 3**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses wherein said first condition is also running a second applications program and said second condition is only running said second application program (*Page 4, paragraph 0032, lines 8-10, wherein the first snapshot is total capacity for the CPUs is the first snapshot and 'consumption for cycle waster process' is the second snapshot*).

Art Unit: 4156

6. **With respect to claim 4**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses wherein said computer system further comprises a client facility for recording said data record of said usage tracking into a record file (*Page 3, paragraph 0023, lines 1-8; Fig. 1, elements 60, 61, and 80*).

7. **With respect to claim 5**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses wherein said snapshot capture program captures said first and second snapshot using substantially identical amounts of time during functional operation for said snapshot (*Page 3, paragraph 0029, lines 1-7*).

8. **With respect to claim 6**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses wherein said resource usage object is CPU processing (*Page 2, paragraph 0019, lines 1-8*).

9. **With respect to claim 8**, Circenis et al. disclose the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses wherein said resource usage object is a plurality of objects and usage tracking data for each of said plurality is identifiable (*Page 4, paragraph 0031, lines 6-15, wherein each active CPU is a different resource object and each active CPU's usage 'statistics' is kept for record*).

Art Unit: 4156

10. **With respect to claim 10**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. also discloses means for revealing primary processes used in active phase and an amount of resource used by said primary resources by said application program and means for producing a report having a resource usage profile for said application program from said revealed data (*Page 3, paragraph 0029, specifically lines 1-4 and lines 17-19; Fig. 3*).

11. **With respect to claim 11**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 and 10 above. Circenis et al. also discloses having a billing program that uses data from said resource usage profile for said application program to identify charge backs for usage of said application program billing (*Page 3, paragraph 0023, lines 14-19; Fig. 2, element 82*).

12. **With respect to claim 12**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 and 10 above. Circenis et al. also discloses wherein a billing factor is created from said resource usage profile for said application program, and said billing factor is applied to a total amount of resource usage by a billing program to generate charge backs to users of said application program (*Page 5, Claim 32, wherein the relationship between the bill and the measurement of CPU usage is the billing factor*).

Art Unit: 4156

13. **Concerning claim 13**, Circenis et al. discloses a computer program having an application workload profiling capability for use with a commodity operating system wherein said operating system has an operating system facility for tracking resource usage of said resource in said computer system and making a data record of said tracking, comprising (*Page 4, paragraph 0031, lines 10-23; Fig. 4, elements 220, 225, and 230*):

a snapshot capture program for capturing said usage tracking data for all said each processes running during a functional operation of said computer system, wherein said snapshot capture program captures a first snapshot capture file that includes usage tracking data in an active phase for all processes running during use of a program to be profiled under load and wherein said snapshot capture program also captures a second snapshot capture file of usage tracking data for processes running during an active phase of said computer system in a different condition (*Page 4, paragraph 0032, lines 1-8; Fig. 5, elements 260 and 265*), and

an arithmetic mechanism for subtracting said second snapshot capture file from said first snapshot capture file (*Page 4, paragraph 0032, lines 8-10; Fig. 5, element 275*).

14. **With respect to claim 14**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 13 and 2 above.

15. **With respect to claim 15**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 13 and 3 above.

16. **With respect to claim 31**, Circenis et al. discloses a method of profiling a first applications program workload comprising:

obtaining a data record of object usage from an operating system facility for tracking resource usage by each object using said resource in said computer system and making a data record of said tracking, said obtaining capturing (*Page 4, paragraph 0031, specifically lines 20-24; Fig. 4, element 230*);

a first snapshot of usage data for all said each objects running during a functional active phase operation of said computer system by said first applications and a second applications program, and a second snapshot of usage data for all said each objects running during a functional active phase of said computer system by a second applications program (*Page 4, paragraph 0032, specifically lines 4-8*), and

comparing said functional active phase second snapshot to said functional active phase first snapshot to reveal which of said objects are using said resource while in said active phase (*Page 4, paragraph 0033; Fig. 6, element 226, wherein the*



Art Unit: 4156

*'cycle waster' is not an active use of the system and is identified by name to not be included in the actual CPU utilization).*

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Circenis et al. in view of Dutta.

3. **Concerning claim 7**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. does not teach wherein said resource usage object is I/O handling. However, Dutta teaches tracking I/O usage at *Page 3, paragraph 0034, specifically lines 15-19, wherein the amount of time communicating [which requires input/output from the computer system] tracks I/O handling by the computer system*. This known technique is applicable to the system of Circenis et al. as they both share characteristics and capabilities, namely the tracking of usage of a computing system. One of ordinary skill in the art would have recognized that applying the known technique of Dutta would have yielded predictable results and resulted in an improved system. It would have been recognized that applying the technique of Dutta to the teachings of Circenis et al. would have yielded predictable results because the level of ordinary skill in the art demonstrated by the references applied shows I/O usage tracking features into similar systems. Further, applying the tracking of I/O usage to Circenis et al. would have been recognized by those of ordinary

Art Unit: 4156

skill in the art as resulting in an improved system that would allow more detail according to the specific operations handled by the computing systems resulting in a closer measurement of the actual usage of all resources that a user can undertake on the computing system.

Art Unit: 4156

4. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Circenis et al. in view of Applicant's Admitted Prior Art (further referenced as AAPA).

5. **Concerning claim 9**, Circenis et al. discloses the invention substantially as claimed. See discussion of claim 1 above. Circenis et al. does not teach wherein said resource usage object is all processes whose resource usage is tracked by an Operating System function. However, the use of an Operating System functions to retrieve usage data from processes is old and well known in the art as evidenced by the applicants own admission of *Page 5 and 6, specifically 'well-known client programs Windows Task Manager or System Monitor' that a part of 'Windows NT Performance Monitoring API, as disclosed by the applicant starting on Page 5, line 27 to Page 6, line 2: "All of this profiled application's processes are then known from the Performance Monitoring API together with how much of them is used in proportion to the other resources used by the application while that application is active."* The AAPA teaches the known process of using an operating system to obtain usage measurements of a computer system's resources. It would have been obvious to one of ordinary skill in the art to include the usage tracking system taught by Circenis et al. the ability to use the functions of 'Windows Task Manager' and 'System Monitor' that are a part of Windows NT Performance Monitoring API disclosed by AAPA since the claimed invention is merely a combination of old and well known elements, and in the combination each element would merely have performed the same function as it did separately, and one

Art Unit: 4156

of ordinary skill in the art would have recognized that the results of the combination were predictable.

Art Unit: 4156

6. **Claims 16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Circenis et al. in view of Danneels et al.

7. **Concerning claims 16 and 17**, Circenis et al. teaches the method and system described in **claims 13 and 1**. However the reference does not explicitly teach providing these instructions on a machine-readable medium. Danneels et al., however, teaches a computer-implemented method realized as one or more programs on a computer (*see Col. 2, lines 40-46 of Danneels et al.*) In addition, Danneels et al. teaches that the programs are storable on a machine-readable medium such as a floppy disk or a CD-ROM (*see Col. 2, lines 46-49 of Danneels et al.*). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Circenis et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of distribution and installation and execution of the software on another computer (*see Col. 7, lines 46-49 of Danneels et al.*).

Art Unit: 4156

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW F. SEBROSKI whose telephone number is (571)270-7055. The examiner can normally be reached on M-F 7:30 AM - 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES R. KYLE can be reached on (571)272-6746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4156

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANDREW F SEBROSKI/  
Examiner, Art Unit 4156

11/3/08

/Charles R. Kyle/  
Supervisory Patent Examiner, Art Unit 4156